

35. Перевернул астронавта ногами вниз и обомлел! Разгадка «Джемини-4». Часть 5.

16-20 minutes

We continue to talk about how Hollywood filmed the falsification of E. White's spacewalk. Allegedly, this historical event took place 2.5 months after the spacewalk of Alexei Leonov (USSR). But in fact, the entire US "space walk" was filmed in the pavilion. Today's part will be devoted to how the effect of a ribbon fluttering in weightlessness was created in the pavilion.

Part 1. [How the spacewalk was filmed in the pavilion, or the solution to Gemini 4.](#)

Part 2. [Where the glove flies, or the solution to "Gemini 4".](#)

Part 3. [Somersault in zero gravity, or the solution to "Gemini-4".](#)

Part 4. [Rotary decoration for weightlessness, or "Gemini-4" solution.](#)

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PART 5.

There is such a funny shape-shifting picture. On it, young people smile cheerfully, their faces glow with good nature.

Думаешь они улыбаются?
Переверни картинку!



However, if you turn it over, then the good nature of the picture instantly disappears, the cheerful smiles immediately turns into angry grins.



We're not used to seeing faces upside down. In our memory (almost from childhood), the only image of a smile is imprinted - the lips stretched out like a crescent downward, revealing a row of teeth. And when **on an inverted face** we see the same smile, crescent down, it seems natural to us. But as soon as this picture is turned over, the "crescent moon down" becomes a bulge upward, and this position of the lips is not associated with a smile, but rather resembles an evil grin.

Here is another shape-shifting picture from the same series - a change in perception from a coup. Try to turn it over!

Warning!!! Don't turn me upside down..



We can recall dozens of such pictures, the perception of which changes from a coup. The signs by which we determined the meaning of the drawing disappeared when it was rotated. And completely different signs appeared, which became dominant.

The same drastic changes in White's commercial will now occur in your perception when we turn the actor depicting an astronaut in outer space from head to feet. As you saw, in the 9-minute video, he is in an inverted position for about half the time - with his feet up. It seems that he is just floating in zero gravity, now moving away, now approaching the Gemini capsule. But it only seems so. As soon as the picture is turned upside down, the astronaut's "evil grin" appears. You suddenly begin to see what was previously hidden from you: the actor hanging on the cable does not hover at all, but constantly performs a large number of pre-agreed commands from the director - then he shakes the hose hysterically to cause the maximum "bumpiness" of the hose attachment sleeve, then with his hand catches "naughty" tapes and swings them left and right,

And what previously seemed **completely random**, for example, the fact that during the "flight" the actor goes out of the frame for 30 seconds or that he hides behind the nose of the capsule and "sticks" to it for 20 seconds, is now perceived as specially conceived **a technical element** to hide the problems that arise during the filming in the pavilion.

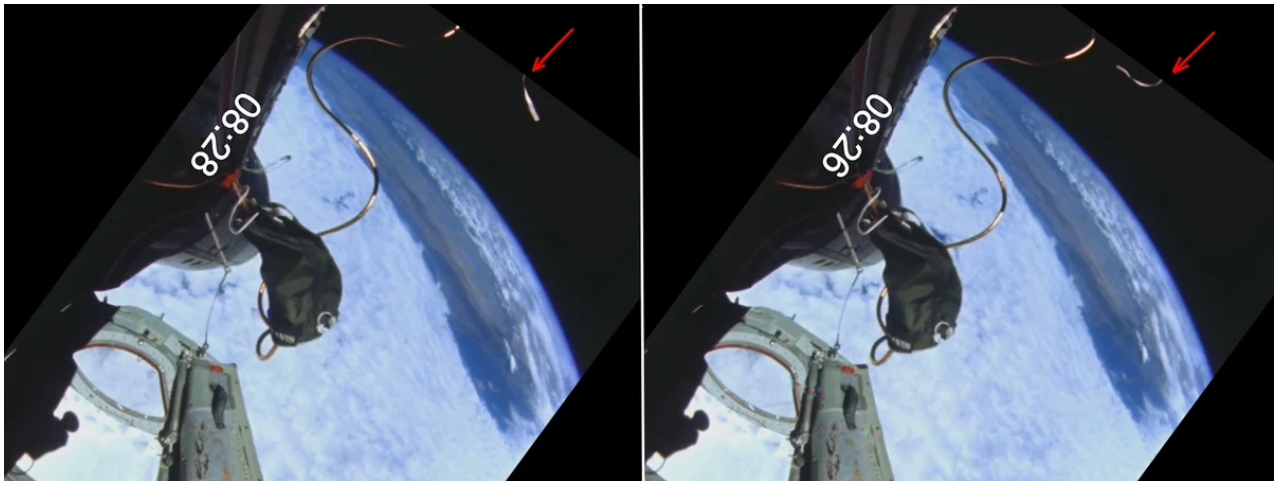
It is absolutely unambiguous that the video is accelerated 3 or 4 times. And there is also no doubt that it is shown in reverse - in reverse. The reverse is indicated by at least 5 facts, which we will analyze in our study.

Therefore, we will investigate the video in the form in which it was actually filmed, i.e. turn the video from end to beginning and remove artificial slowdown. The timecode will run in the opposite direction, from 8:55 (at the beginning) to 0:00 (at the end).

So, we launch the video and disassemble it sequentially second by second!

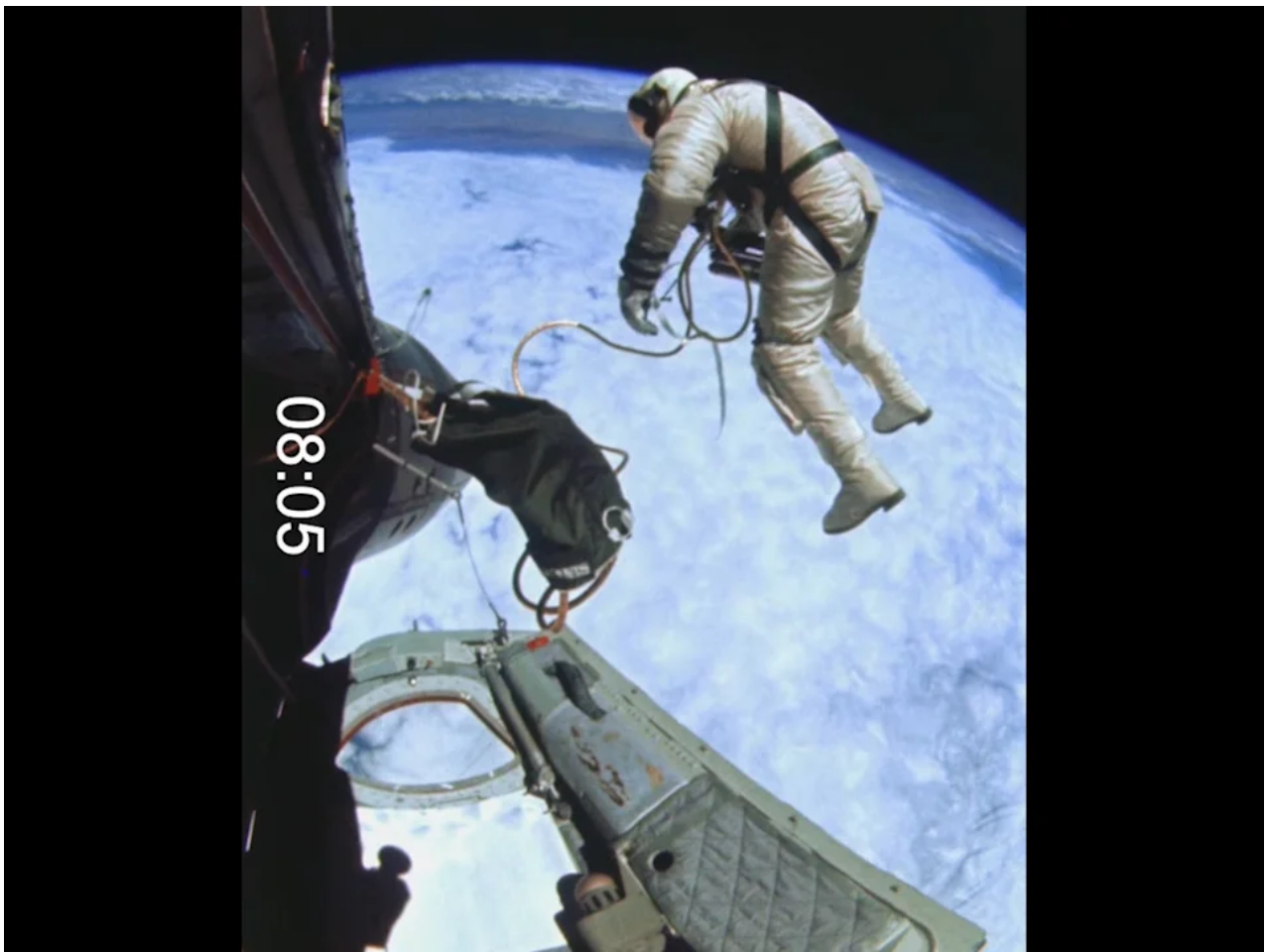
For the first 30 seconds (according to timecode), there is no one in the frame, we see only the capsule and the Earth's cloud cover. 30 seconds after the start, at 8:22, a hand enters the frame.

Until this moment, only a piece of tape appeared at the top of the frame, which swung slightly to the right and then to the left.



The edge of the tape at the top of the frame deviated slightly to the right (8:28) and then to the left (8:26).

From the shadow on the hose, we notice some sort of flickering of the astronaut. You will soon find out what the astronaut was doing while off-screen. The entire figure of the astronaut appears at 8:09 am, swimming from top to bottom. We already know that the astronaut was hanging almost all the time in the same place, in the same position, with his legs spread out. At 8:05, we see this starting position - in the form of the letter "P".



The same position remains throughout the video.

At the end of the video, he still hangs with his legs outstretched and in the form of the letter "P" (2:32).



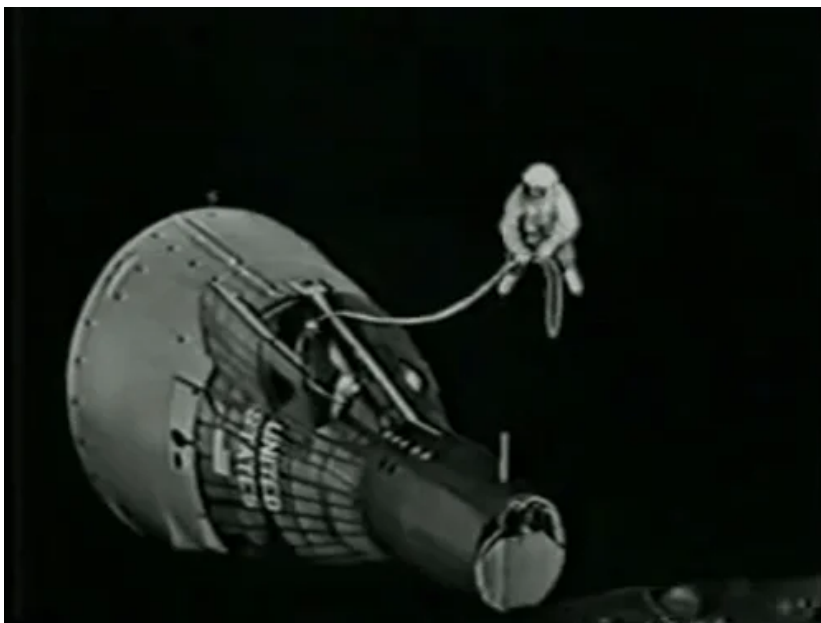
And even when he enters the capsule (2:06), the actor does not change either the position of the legs or the position of the body.





The view from the lower angle - this is how the legs of the "astronaut" were spread out.

The actor who portrayed the astronaut all the time hung with his back up, with his feet down. In much the same way as it was shown live on television in June 1966 during the flight of Gemini 9. There, the actor in the simulator illustrated what a spacewalk looks like. It was suspended on a cable and spun around the capsule mockup, posing as an astronaut in orbit.



Fragment of the live broadcast of the astronaut's spacewalk, Gemini-9.

The actor in the simulator, hanging in the pavilion on a cable, is no different from the supposedly real astronaut White, who went into outer space. Is that the speed of White's display was greatly slowed down so that there were no sharp jolts.

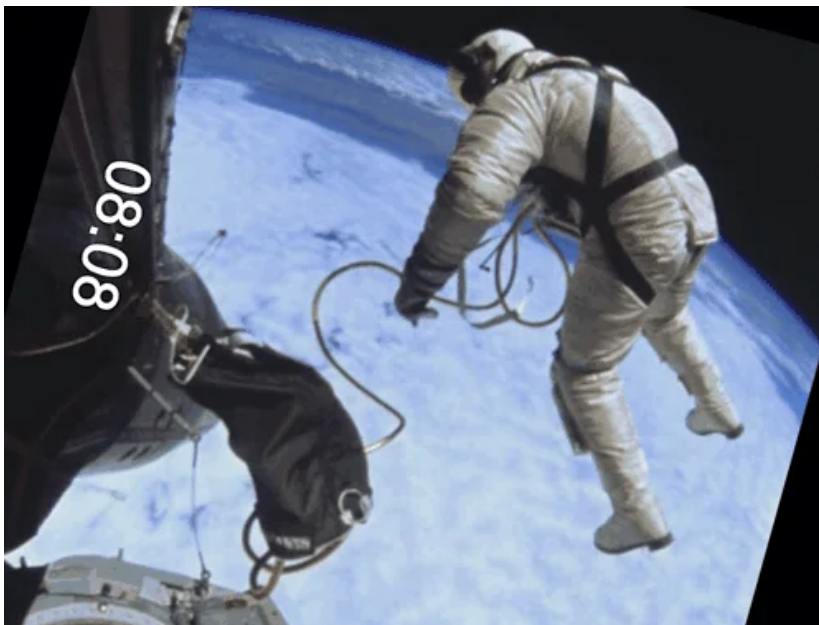
The fact that this is the real position of the actor "White" (at 8:05) is indicated by the tape, the end of which hangs vertically downward under the influence of gravity (along the leg).



The end of the tape hangs vertically downward, catching on the arc of the hose.

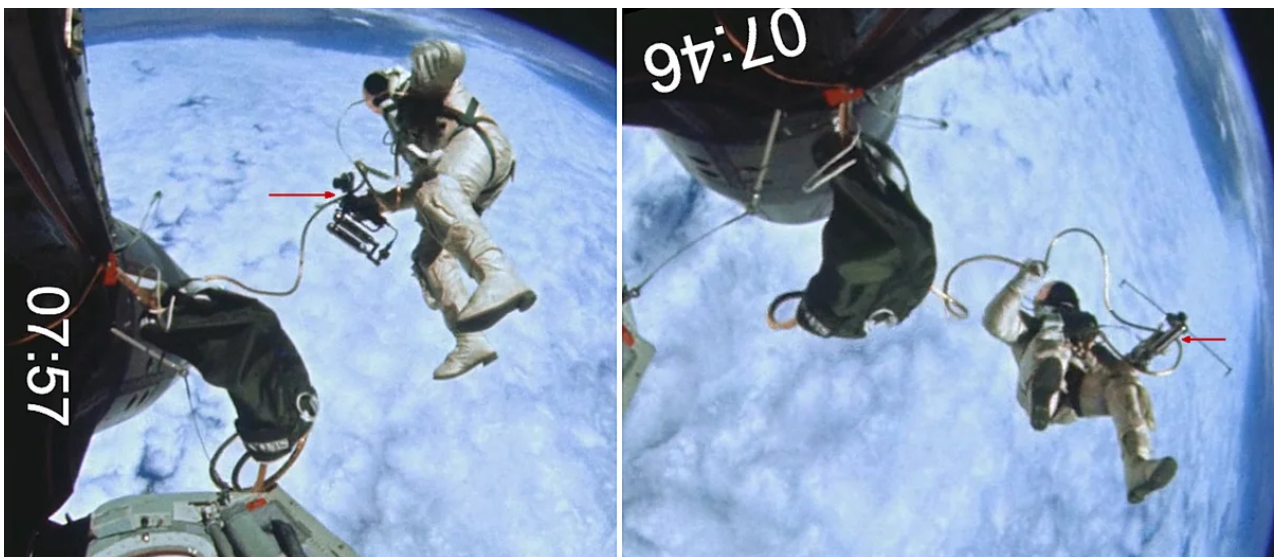
There is no weightlessness. It only seems that the ends of the ribbon flutter freely in zero gravity. In fact, the tape swings left and right, like a pendulum, relative to the vertical position. To make the swinging amplitude larger, an interesting method was invented with an air stream coming out of the hatch. Below we will describe this in detail, but now we will pay attention to the fact that the axis of rotation (swinging) of the tape is on the hose.

To make the trick with swinging the tape a success, a segment of the hose in the form of a sagging arc was selected in advance. Check out the gif file. Please note that the astronaut turns the helmet with his head! The helmet turns with the head, Karl!



The tape swings back and forth. (Gif file)

This sagging segment arose from the fact that on one side the hose is attached to the astronaut's chest (to the suit), and about a meter later it is rigidly attached to the pneumatic gun, in the place where the camera is located. It is around this segment of the hose that the tape will swing.



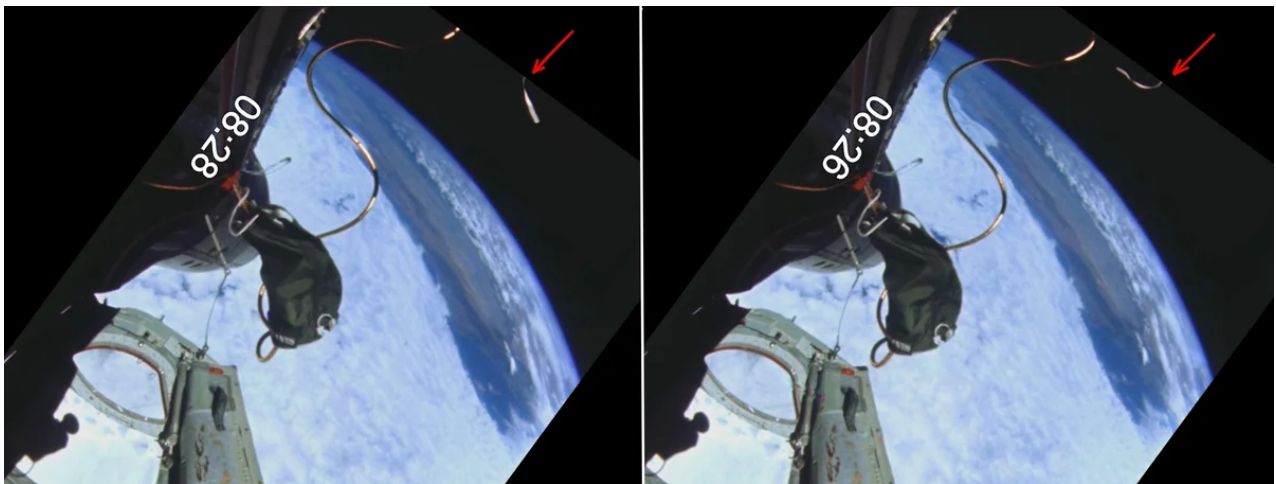
A sagging segment of the hose (in the form of an arc) is made between the astronaut's chest and the pneumatic gun. The hose attachment point is indicated by an arrow.

So, the right hand with the air pistol is pushed forward (see time 8:05 or 7:57), and the arc of the hose sags between this hand and the astronaut's chest.

Now watch the magician's left hand!

When the astronaut just appears in the frame, he throws the end of the tape into the frame, throwing it through the hose so that it can begin to swing, back and forth, like a pendulum, leaning on this segment of the hose. The actor's right hand is occupied with a pneumatic pistol, so he throws in with his left hand. This is exactly what he was doing off-screen.

At 8: 29-8: 25, the edge of the tape appears. The tape first moves a little to the left, then returns to the right, but then, at 8:25, it leaves the frame. So far, the amplitude of the ribbon swing is quite small, but it is already swinging like a pendulum.



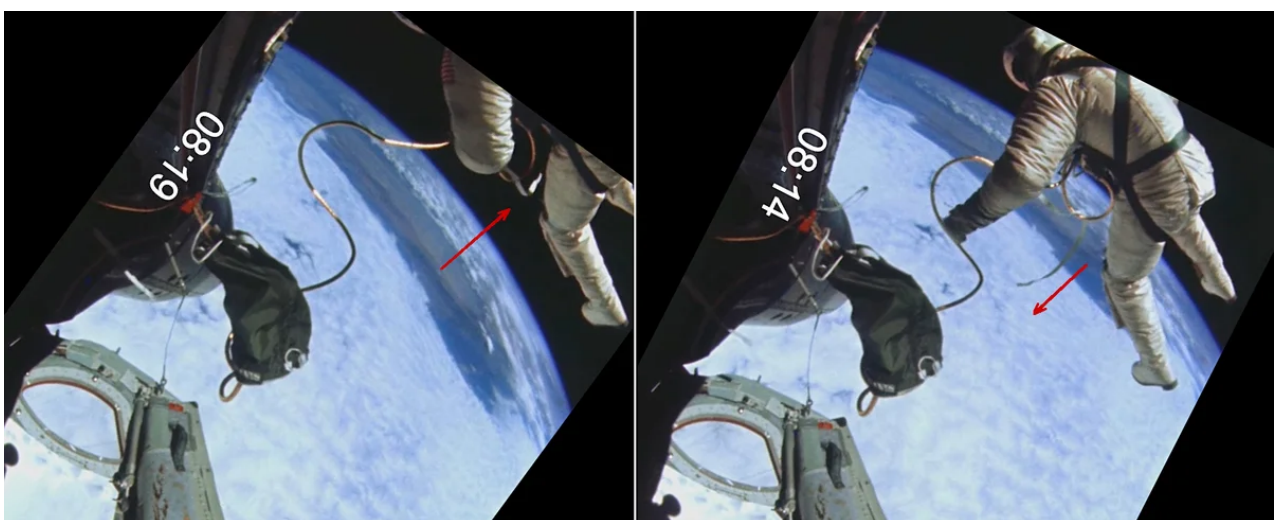
The edge of the tape appeared from outside the frame.

Then the tape is covered by the figure of the appearing astronaut and at 8:21 we see it again. Since the tape at this moment in time (8: 29-8: 21) appears only fragmentarily and in a small piece, we restrict ourselves to characterizing its movement by the term "slight wobble".

But then the tape appeared entirely and its movements acquired an orderly character.

At 8:20, we see that the edge of the tape began to move to the right, moving away from us. The crowded tape began to unfold, straighten, and the amplitude (maximum distance) became very noticeable.

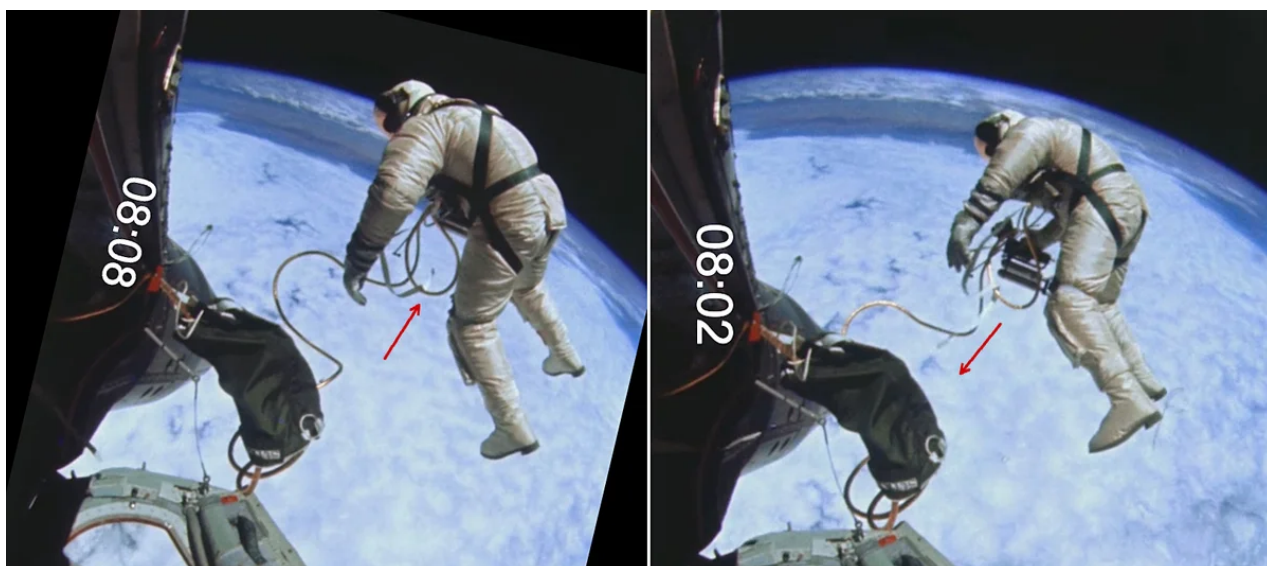
8: 18-8: 12 - the tape is moving in the other direction, to the left (approaching us).



First cycle. The tape moves left and right. The direction is indicated by an arrow.

8: 11-8: 07 - again moves away from us, moves to the right,

8: 07-8: 00 - moves to the left, towards us.



Second cycle. The tape moves left and right. The direction is indicated by an arrow.

We had a question: what suddenly caused the tape to swing with a large amplitude, because at first it swayed slightly left and right? What was it that was so special about 8:20 that caused the tape to deflect so much? The answer to this question is on the other side of the set. If the wobbling astronaut is on the right side of the frame, then the answer is on the left, where the hatch hole is. For the first 30 seconds (more precisely, 28 seconds), nothing happened inside the capsule. But at 8:26, a portion of compressed air was thrown out from there, from the inside, towards the astronaut. The ejection went on for 5 seconds, from 8:26 to 8:31. This stream of compressed air reached the belt, and at 8:20 the end of the belt fluttered in the wind and flew to the right. The tape has deviated to the right at the maximum possible angle, almost 90 degrees from the vertical. But since the release of compressed air has stopped, then the tape, under its own weight, began to return back, by inertia passed the vertical position and began to rise up to the left. Before she had time to reach the extreme left position, a new impulse of compressed air was sent to meet her. And the tape had no choice but to fly back.

I remember that we dabbled in the same way in childhood on New Year's Eve, when a stream of air from our mouths swayed plastic snowflakes suspended by strings on a Christmas tree, adjusting to the swing amplitude.

Where did we get such confidence that there was a pulsed flow of compressed air during the filming of the swinging tape? And how did we know that the impulse lasted 5 seconds? By the way, we name the time only by the timecode of the video, so that there is no confusion. I hope you understand that these screen 5 seconds lasted much less (shorter) in reality. The impulse was less than two seconds.

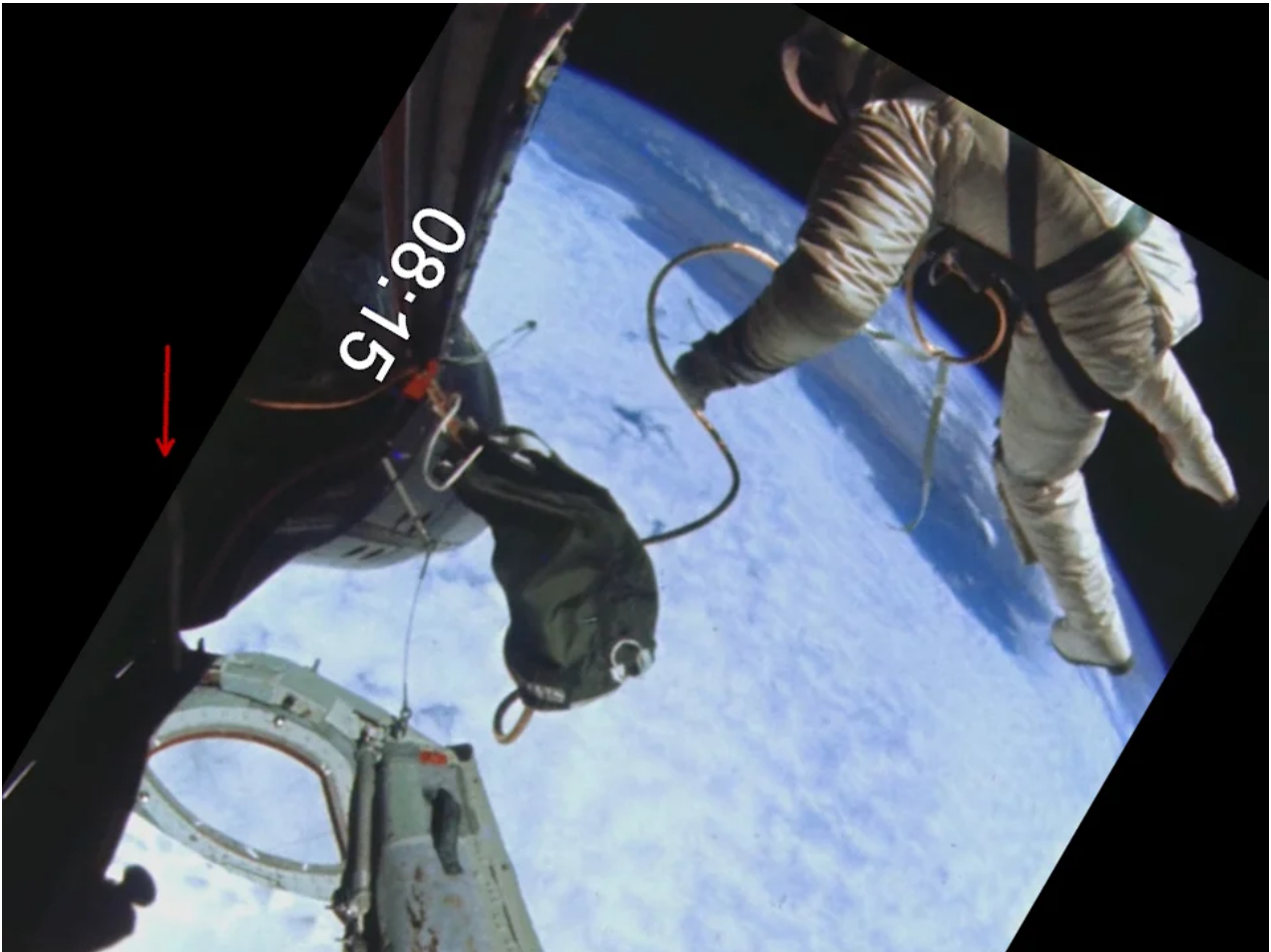
It's incredible, you may not even believe it, but there, right in the frame, there is a compressed air supply indicator. Moreover, the astronaut turns his head and looks at him. And he, this indicator, was specially made large and bright so that the "astronaut" through the dark glass of the helmet could notice it and synchronize his actions. The fact is that after the tape made two swings - left and right, left and right - a third impulse of compressed air was given. After this (third) impulse, at 8:00-7:57, the tape went, wriggling, again to the right, and then the astronaut grabbed the end of it with its hand. On the first attempt (7:57) he failed to do so, but the second attempt, at 7:56, was successful.

VIDEO: [Two rocking of the tape and its capture.](#)

The astronaut, in accordance with the developed scenario, had to catch the tape after two swinging and hold it. And so, to see the beginning of the third impulse, he turns his head and looks towards the open hatch at the air

flow indicator. It is a short, light colored ribbon hanging vertically.

The way the frame is now located is the real position of the capsule relative to the horizon. It's just that the frame was rotated during filming around its axis (around the axis of the lens) - we already wrote about this in the previous, 4th part. Accordingly, in this frame, the indicator tape hangs vertically downward.



The indicator tape in the hatch hangs vertically downward.

But as soon as a stream of compressed air begins to come out of the hatch, the tape rises and takes a horizontal position. Here it is in the picture, this indicator tape.



The flow of compressed air caused the indicator tape to rise.

The indicator tape first hangs vertically downwards, and after the supply of compressed air rises to a horizontal position. You can easily spot this indicator in the GIF above.

Someone, analyzing the movement of the tape, expressed the idea that the shooting could take place in a wind tunnel. But everything turned out to be simpler: at a certain point in time, a small portion of a stream of compressed air was supplied from the open hatch in order to swing the freely hanging end of the tape.

The fact that when shooting "White's exit" a strong air flow was used has long been expressed by A. Popov in his article ["Gemini" scam](#) .

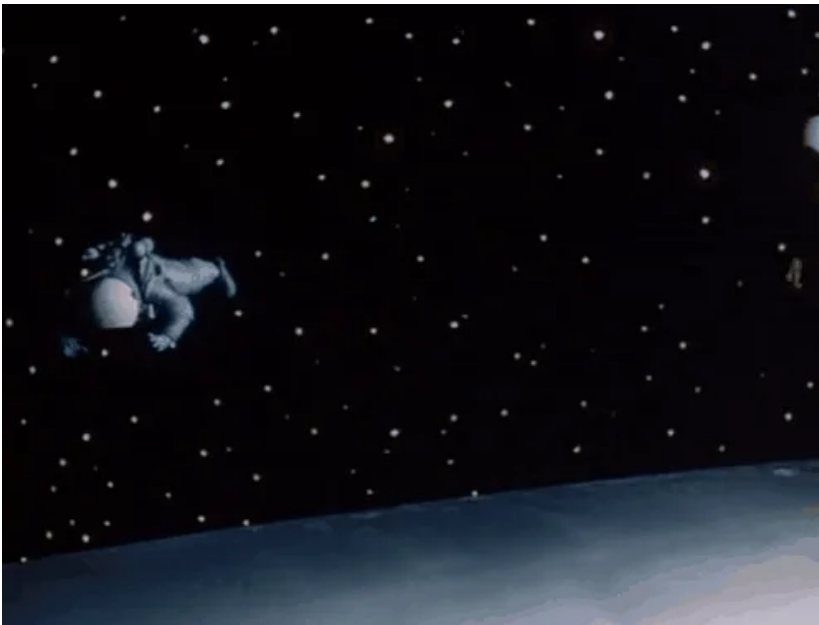
I will quote A. Popov's conclusion: **The episode with the "impatient" tape is the first indication of the use of a vertical air flow for staging an exit into "space".**

So that when you watch the video, you could not understand that the tape is swinging in a vertical plane, the frame was rotated by an angle from 120 ° at the beginning to 90 ° at the end of the swing.



A still from the video "E. White's spacewalk." The end of the tape actually hangs vertically downward, but you feel (due to the frame being rotated 90 degrees) that the tape is floating in a weightless, horizontal plane.

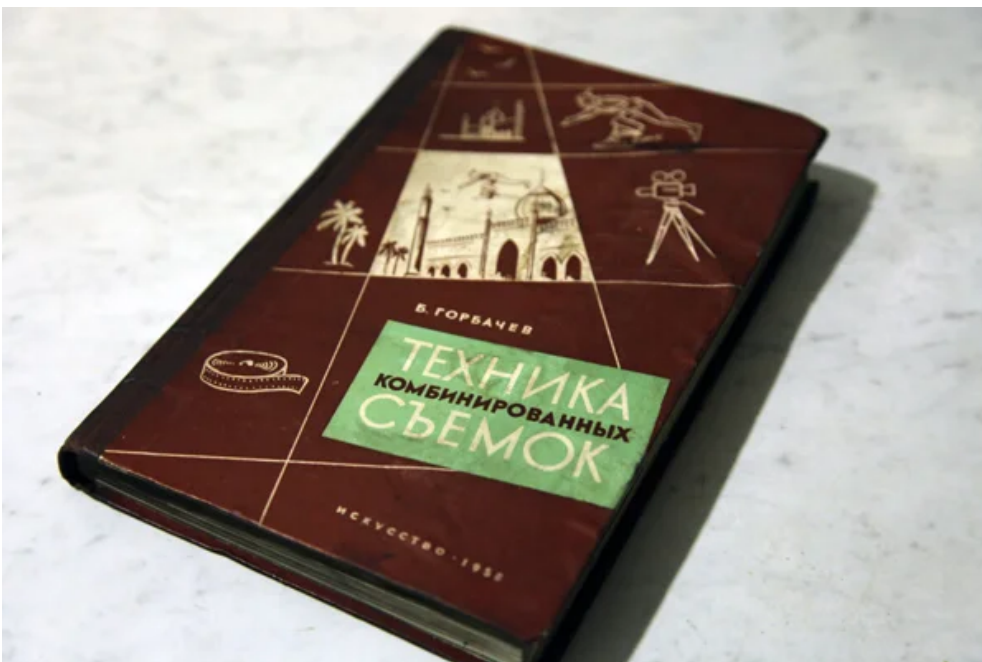
The director of the short film *Ellen G. White Goes Into Space* is not the first to use the free-hanging end of a tape to simulate weightlessness. The idea itself - to create the effect of weightlessness using a ribbon or rope - has already been used more than once in space-themed films. We will give two similar examples from science fiction films about flights to the moon. The first example is from the 1950 American movie *Destination Moon*. One of the astronauts inadvertently slipped off the outer surface of the spacecraft and was carried into open space. The other two astronauts throw a rope to save him. But the end of the rope did not reach the distance to the astronaut who had flown away and hung in weightlessness.



We see that in two planes the white rope moves in a horizontal plane and does not sag down under its own weight, it seems to float in weightlessness. Of course, the modern viewer immediately guesses that this rope is being pulled from the other side by a thin black cable that merges with the blackness of "space". And the astronaut hovering in zero gravity is simply suspended behind his back. We know that in this film the actors used [piano strings](#) .

There is a similar scene in the film "Space Flight" (USSR, 1935). Academician Sedykh, who is on the interplanetary spacecraft, throws a rope to rescue a boy flying close to space speed. But here the filmmakers acted differently.

This is how the cameraman B. Gorbachev describes it in the book "Technique of combined shooting".



It is almost impossible to make such a shot on a conventional set. If you tie a long thin cable with a counterweight to a rope, throwing it out of the frame through a block, then in this case, the rope that has flown out of the actor's hands will stretch out and hang with a large deflection in the middle, which will give the viewer an idea of the presence of gravity.

Such a shot can be made using the technique of an unusually placed camera. For this, a part of the "Astroplane Deck" set should be placed vertically ... By placing the apparatus against such a set, not usually, but on one side, you can shoot the intended frame. The actor will throw the coil of rope down, but on the screen the viewer will see the rope flying forward and stopping in space without any deflection.

This is exactly the technique that was used in the video, where White allegedly swings a tape in outer space. The tape hangs vertically down and sways in a vertical plane. But the camera is set in an unusual way - it is rotated 90 degrees. Because of this, the free edge of the tape appears to wiggle horizontally on the screen. And this, according to the film crew, can only be in zero gravity!

So, out of 9 minutes of duration of White's space walk, we analyzed 1 minute 10 seconds, from 8:55 to 7:45, considering the trajectory of the tape. At this time, she was in "free flight". After 7:45, the actor grabbed the edge of the tape and did not release it. **We did not find any weightlessness, the tape simply swung left and right relative to the vertical position. The tape was attached at one end to the chest of the astronaut's suit, and the free end simply hung from the hose vertically downward under its own weight. Gusts of compressed air were used to swing the belt.**

In the next part, we will tell you why the actor portraying the astronaut grabbed the tape and for what purpose, after that moment, he began to hysterically shake the hose, which acts as a halyard.

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Continuation. **Part 6** .[Why was the astronaut tugging at the halyard so hysterically?](#)

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Cameraman L. Konovalov was with you. Until next time!